CoP IV Workshop Homework

Questions:
1. What are the weaknesses that you see in how NASA is using knowledge management?

2. What are the barriers to successful knowledge management at NASA?

3. What can NASA do about the barriers?

4. What can PBMA do about it?

Responses:

Lynn Boukalik
1. There is no NASA wide plan. HQ has concentrated on rolling out tools. There is no effort to understand that **the most significant problem is not capturing current knowledge in a strategic fashion** to save for the next generation engineers and scientists. The new Exploration program appears to include the use of older technology. Do we have a clear understanding of how that technology was designed, planned and what hurdles were overcome to accomplish the design? In many cases the engineers, mission specialists and scientists are no longer at NASA.

Capturing knowledge from project, missions, and fundamental research has never been a priority. Even when small groups have worked to document progress, the effort to pass along that knowledge to the next generation has not been a priority. The use of basic KM tools like AARs, Peer Assists (Reviews), mentoring, and storytelling has never been encouraged. Lessons Learned and Best Practices are an afterthought rather than been built into the actions, research or mission.

It is now more critical than ever to pass along knowledge. The number of NASA staff that is ready for retirement is significant. Have these individuals worked to pass along their knowledge. What plans are there to help them? This is how we can become a learning organization.

2. The emphasis on the use of IT tools to solve KM issues is endemic throughout NASA. The real need is to encourage a culture of learning. Passing along information and knowledge within teams, and communities of practice would be a significant step towards becoming a learning organization. Sharing what is known is the most significant barrier.

The fact that there is a sea of conflicting tools does not help. There is a basic need for KM training so that all members of NASA have an understanding of how to pass along knowledge. The IT tools can supplement the use of the basic KM processes such as AARs, Peer Assists, Lessons Learned, Best Practices, and Communities of Practice.

Forming Communities of Interest – Practice where members feel that discussion is safe and will not affect promotion or is protected from RIF planning will help the members feel comfortable sharing knowledge.

Another barrier is the re-use of knowledge. I have been associated with several different projects over time. Each time a new project is formed there is a sense that we are beginning from scratch. There is not clear method to use pass knowledge to build upon. The type of culture that does not encourage the use of past knowledge tends to re-invent the wheel each time. This is particularly true of the lack of effort and trust to share knowledge between centers working on similar efforts.

3. The agency needs to start right now with a plan to provide an understanding of how to capture and share knowledge. Capturing knowledge can be aided by IT tools, but it needs to begin by understanding how to encourage an open and trusting environment, so that people can share. The use of AARs, Peer Assists, Communities of Practice and other practices can be taught. A plan for mentoring can and should be created. Mentors should be rewarded for encouraging the sharing of knowledge. Currently individuals are working with younger members of the staff, but there is no effort to plan for the capture of knowledge agency wide. A methodology that is well planned and communicated to all will go a long way to encourage sharing.

No recriminations! NASA personnel have not in general felt that sharing is a benefit to them. The method of reward and promotion has been based on individual contributions. This needs to be addressed.

4. PBMA offers a series of tools that can help document knowledge. The nuggets, document libraries, databases and discussions will support efforts to capture knowledge. The communities will provide a space to share knowledge. However, with out clear roles of members within the CoPs, these areas will not be as effective as they need to be. Senior members of the team have a responsibility to work with junior members to pass along current and past knowledge.

A community leader who can work with the members to encourage trust and openness within the community is essential. Members of the team who can review the various placed for knowledge and pull out nuggets and capture and distill the knowledge will aid the process. Someone responsible for making sure that all members are included in discussions and all voices heard will help make the CoP an open and comfortable place.

At BP, we had specific roles for members of a community of practice. These roles can be incorporated into the current PBMA communities.

Using this tool will be an asset, if the PBMA community can teach how to use the tool effectively.

One concern is the silo effect. If the safety community has individual CoP for each center or each area, then there is little or no sharing across boundaries. The silo effect will need to be addressed.

Robert Loomis

1. Several already pointed out eq. too many data cribs and KMs.
Also,
a. Programs that are largely stove piped (good for program but bad for sharing).
b. No strong incentives or clearly elaborated benefits to knowledge management. If people perceive value they will embrace. If perceive as just another HQ mandated program, the enthusiasm will not be there.
c. We are not truly One NASA. There is still a lot of "Not Invented Here" with Centers & Programs.

2a. Lack consistent approach that encourages use of KMs.
b. Selection of a suite of standard KM tools.
c. Encouragement (not mandate) of KMs use.
d. Provide resources – do not make people take this out of their hide, like so many HQ mandated programs.

3. Actually, I discussed some of them in Question 2. Encouragement, resources, common tool set. Reduce stove pipe and "Not Invented Here" (this is tough!)

4. Lots of good functionality suggestions of presentations. Many requested that some of the functionality of the "old" system be included in the "new" (Secure Work Group) section. From my stand point, the system seems very good. A couple of suggestions: Make an option to archive the secure online meeting. There are times when you want to save the information. The default could still be to not save, but please allow the meeting to be optionally saved. In SecureMeeting establish an audio capability. With VoIP, this is certainly "do-able". It would be great to not have to establish a parallel telecon – use the meeting tool! For those without microphone/speakers allow them to dial into the tool with a conventional telephone.

Catherine Birchall

1. I don't think NASA has promoted the use of Knowledge Management enough. Not everyone is using this system.

2a. Communication: The benefits of KM have not been communicated throughout the entire NASA community.
b. People's lack of interest: Some people may not want to use this system because of its complexity.
c. Inefficient training: Some people may not use the systems full capability because the do not know how to use it.

3. Aggressively communicate and promote knowledge management throughout the entire NASA community and train personnel in its use.

4. Continue to hold conferences/workshops to inform people of its capabilities. Identify people/organizations/ competencies that can benefit from KM, and urge them to use it.

Kristie French?

1. General population is not aware of program.

2. Not an integral part of program or center ops.

3a. Management commitment and communication.
b. Field agents mining the NASA population current and retired.
c. Contractor initiatives.

4a. Provide the forum to gather and distribute the knowledge through video nuggets.
b. Increase archive capability.
c. Increase search capability.

Bruce Funderburg

1. Data is compartmentalized in multiple systems and work groups, with access limited to certain people, typically organized along NASA Centers on project lines. This is the equivalent to a library that organizes its content by the authors city of birth, that has a different library card (access) and card catalog (searching) for each of these criteria. Imagine the difficulties in finding information at this library compared to a conventionally organized library.

2. Security concerns, and lack of unified "One NASA" approach.

3. No response.

4. Encourage longer work groups organized by subject rather than center and/or project. Do not overly restrict access to less sensitive data.

Anonymous

1. Too many databases, different groups have their own internal database – sometime even multiple databases, everyone dancing to their own song (some good at it – some not) but not dancing with everyone on the dance floor.

2. Contracts with no requirement for sharing information, contractor to contractor firewalls.

3. I don't know if anyone is doing anything – maybe NASA to NASA internal agreements.

4. I think PBMA can be utilized to ensure secure, complete and easy access to data sharing. It can ensure that the data being used is correct (or at least the same across the board). It appears to provide fast and user friendly access.